letters
Tables

ATTACHMENT A

AGRIUM KNO FACILITY

CONTINUOUS RELEASE-EMERGENCY RESPONSE NOTIFICATION SYSTEM REPORT

Agrium Attachment JJ LOT — ENV-07-02
Kenai Nitrogen Operations

SECTION I: GENERAL INFORMATION	CR-ERNS Number: 44607
Date of Initial Release:	Date of Initial Call to NRC: 10/23/90

Type of Report: Indicate below the type of report you are submitting.

[ ] Initial Written Notification	[ ] First Anniversary Follow-up Report	[X] Written Notification of a Change to Initial Notification	[ ] Written Notification of a Change to Follow-up Report

Signed Statement: I certify that the hazardous substances releases described herein are continuous and stable in quantity and rate under the definitions in 40 CFR 302.8(a) or 355.4(a)(2)(iii) and that all submitted information is accurate and current to the best of my knowledge.

M. L. Nugent, Plant Manager
Name and Position

8/13/99
Date

M L Nugent
Signature

Part A. Facility or Vessel Information

Name of Facility or Vessel: Alaska Nitrogen Products LLC
Kenai Plant

Person in Charge of Facility or Vessel:
Name of Person in Charge M. L. Nugent
Position Plant Manager
Telephone No. (907) 776-8121 Alternate Telephone No. ( ) None

Facility Address or Vessel Port of Registration:
Street Mile 21 Spur Highway County Kenai Peninsula Borough
City Kenai State AK Zip Code 99611

Dun and Bradstreet Number for Facility: 092876390

Facility/Vessel Location:
Latitude Deg N 60 Min 40 Sec 22
Longitude Deg W 151 Min 22 Sec 36

Vessel LORAN Coordinates:

Part B. Population Information

Population Density:
Choose the range that describes the population density within a one-mile radius of your facility or vessel (Indicate by placing an "X" in the appropriate blank below.)

X 0 - 50 persons	____ 101 - 500 persons	____ more than 1000 persons
____ 51 - 100 persons	____ 501 - 1000 persons	

Sensitive Populations and Ecosystems Within one Mile Radius:

Sensitive Populations or Ecosystems (e.g., schools, hospitals, wetlands, wildlife preserves, etc.)	Distance and direction from facility
NONE	

Agrium

Agrium U.S. Inc.
Kenai Nitrogen Operations
PO Box 575
Kenai, Alaska USA 99611-0575
Telephone (907) 776-8121
Facsimile (907) 776-3213

February 28, 2002

ENV-030-02
File 40-2.0
40-7.2.0

Chris Field, ERNS Coordinator
US Environmental Protection Agency
Region 10, Continuous Release (HW-114)
1200 Sixth Avenue
Seattle WA 98101

Subject: Routine and Continuous Release, Case No. 44607, Change in Source

Dear Mr. Field,

Agrium Kenai Nitrogen Operations notified EPA of a "routine and continuous release" of ammonia on October 23, 1990 (Case Number 44607). In compliance with 40 CFR 302.8(g)(1), *Changes in Source or Composition*, this letter serves as notification of an additional temporary ammonia release source. Per 40 CFR 302.8(g)(1), the following information is provided.

Source Addition and Description:

Telephone notification of a new temporary source of ammonia was made on February 1, 2002. The ammonia preheater (E-427) is a shell and tube exchanger, with ammonia on the tube side and steam on the shell side. The E-427 developed a tube leak, which caused ammonia to be carried into the 550 pound steam system. Since 550 pound steam is used throughout the facility, small concentrations of ammonia were released from various steam vents throughout the facility and from the cooling tower. Based on laboratory analysis of the steam, it is estimated that an additional 4 tons per day of ammonia was released as a result of the E-427 tube leak. On February 18, 2002, Urea Plant 2 was shut down to repair the E-427, thus stopping the release. The National Response Center was notified on February 27, 2002, that the temporary release source had been eliminated and that our routine and continuous release quantity had returned to its previous level of 2.9 to 9.5 tons of ammonia per day.

Basis for Stating that it is Continuous and Stable:

Tube leaks are known to occur in exchangers, and in this case required a complete plant shutdown to repair. A management decision was made to continue to operate, and the ammonia concentration in the steam was monitored to assure that the carry over of

ammonia into the steam system was stable until a shutdown could be planned. This release qualifies as a routine and anticipated release under 40 CFR 302.8(b).

Further information about this source is provided in the attached worksheets. Please contact me at (907) 776-3135 for additional information.

Sincerely,

Michelle Grzybowski

Michelle Grzybowski
Environmental Engineer

Attachments

CERTIFIED MAIL

cc: Bill Longston – U.S. EPA, Seattle
Bob Petit – ADEC, Anchorage
Camille Stephens – State Emergency Response Commission, ADEC, Juneau
Jan Henry – Local Emergency Planning Committee, Soldotna
Lt. Mark McManus – U.S. Coast Guard, Kenai
Chief Billy Harris – Nikiski Fire Department, Nikiski

SECTION II: SOURCE INFORMATION	CR-ERNS Number
	44607

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate.
For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.

Name of Source: Plant #2: E427 tube leak into 550 pound steam system

1. Indicate whether the release from this source is either:

   continuous without interruption _____ **OR** routine, anticipated, intermittent ___X___

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

   Urea prills production, heat exchange and steam venting

3. Identify below how you established the pattern of release and calculated release estimates.

_____ Past release data	_____ Knowledge of the facility/vessel's operations and release history	___X___ Engineering estimate
_____ AP-42 test	_____ Best professional judgment	___X___ Other (explain) Laboratory Analyses

** Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.*

SECTION II: SOURCE INFORMATION (continued)	CR-ERNS Number 44607

Name of Source: Plant #2: E427 tube leak into 550 pound steam system

Part B: Specific Information on the Source

For the source identified above, provide the following information. Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If your source releases hazardous substances to more than one medium (e.g., a wastepile releasing to air and ground water), treat the release to **EACH** medium as a separate source and complete Section II, Parts A, B, and C, of this format for **EACH** medium affected.

○ **AIR** __X__ (stack ____ or area __X__) If the medium affected is air, please also specify whether the source is a stack or a ground-based area source.

- If identified source is a **stack,** indicate stack height: ____ feet or meters; **OR**
- If identified source is an **area source** (e.g., waste pile, landfill, valves, tank vents, pump seals, fugitive emissions), indicate surface area: __1000__ ~~square feet or~~ square meters.

○ **SURFACE WATER** ____ (stream ____, lake ____, or other _____)

- If the release affects any **surface water body,** give the name of the water body.

  _____

- If the release affects a **stream,** give the stream order or average flow rate, in cubic feet per second.

  stream order: ____ or average flow rate: ____ cubic feet/second; **OR**

- If the release affects a **lake,** give the surface area of the lake in acres and the average depth in meters.

  surface area of lake: ____ acres and average depth of lake: ____ meters.

○ **SOIL OR GROUND WATER** ____

If the release is on or under ground, indicate the distance to the closest water well.

_____

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. **If this information is not provided, EPA will make conservative assumptions about the appropriate values.** Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

- For a stack release to air, provide the following information, if available:
  - Inside diameter ____ feet or meters
  - Gas Exit Velocity ____ feet/second or meters/seconds
  - Gas Temperature ____ degrees Fahrenheit, Kelvin, or Celsius

- For a release to surface water, provide the following information, if available:
  - Average Velocity ____ feet/second of Surface Water

SECTION II: SOURCE INFORMATION (continued)

CR-ERNS Number

44607

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source

Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source: Plant #2: E427 tube leak into 550 pound steam system

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of Reporting Requirements for Continuous Releases of Hazardous Substances – A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. ~~or kg~~ per day)* Upper Bound	Normal Range (in lbs. ~~or kg~~ per day)* Lower Bound	Number of Releases (per year)	Total Quantity Released in Previous Year (in lbs. ~~or kg~~)*	Months of the Release
Ammonia	7664-41-7	10,000 *	0	60 days/yr	0	N/A

*Average quantity released 8,000 pounds per day through February 18, 2002

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances – A Guide for Facilities and Vessels on Compliance.)

Name of Mixture	Name of Hazardous Substance Components	CASRN#	Weight Percentage	Normal Range of Components (in lbs. or kg per day)* Upper Bound	Normal Range of Components (in lbs. or kg per day)* Lower Bound	Normal Range of Mixture (in lbs. or kg per day)* Upper Bound	Normal Range of Mixture (in lbs. or kg per day)* Lower Bound	Number of Releases (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
N/A										

** Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (CI) are appropriate.*

Agrium

Agrium U.S. Inc.
Kenai Nitrogen Operations
PO Box 575
Kenai, Alaska USA 99611-0575
Telephone (907) 776-8121
Facsimile (907) 776-3213

January 17, 2001

ENV-007-01
File 40-2.0
40-7.2.0

Mr. Thor Cutler
Region 10 Continuous Release – ERNS Coordinator
U.S. EPA (HW-114)
1200 Sixth Avenue
Seattle, Washington 98101

Subject: Routine and Continuous Release, Case No. 44607, Change in Source

Dear Mr. Cutler

Agrium Kenai Nitrogen Operations notified EPA of a "routine and continuous release" of ammonia on October 23, 1990 (Case Number 44607). In compliance with 40 CFR 302.8(g)(1), *Changes in Source or Composition*, this letter serves as notification of an additional ammonia release source. Telephone notification of the change was made on December 18, 2000. Per 40 CFR 302.8(g)(1), the following information is provided.

Source Addition and Description:

Beginning December 18, 2000, the Plant 2 Effluent Accumulation Tank (F-434) is submitted as an additional ammonia release source. Tank F-434 is used to collect ammonia and urea solutions from various sources throughout Urea Plant 2. Ammonia vapors from the tank vent are typically recovered in a scrubber. However, a recent incident revealed that during certain operating conditions the pressure relief valve on the tank might be undersized. To ensure that the tank is not over pressured, a vent to atmosphere will remain open on the tank. This will allow a portion of the ammonia in the solution to evaporate to the atmosphere.

The tank's pressure relief valve is scheduled to be replaced this summer, in which case the vent to atmosphere would be closed. Agrium will notify EPA when this ammonia release source is eliminated.

Basis for Stating that it is Continuous and Stable:

During normal operation the effluent accumulation tank holds approximately 25,000 gallons of solution. The solution typically contains small amounts of free ammonia that will evaporate from the solution and be released through the tank vent. Thus, venting from the tank will be continuous. During plant startups the tank level increases and greater amounts of free ammonia are in the solution, which accounts for the

upper bound of the normal reported range. The ammonia released from this source is planned and ongoing, and therefore qualifies as a continuous release under 40 CFR 302.8(b).

Further information about this source is provided in the attached EPA worksheet. Please contact me at (907) 776-3135 for additional information.

Sincerely,

Michelle Grzybowski

Michelle Grzybowski
Environmental Engineer

Attachments

CERTIFIED MAIL

cc: B. Longston – U.S. EPA, Seattle
B. Petit – ADEC, Anchorage
C. Stephens – State Emergency Response Commission
J. Henry – Local Emergency Planning Committee, Soldotna
C. Woodle – U.S. Coast Guard, Kenai
Chief B. Harris – Nikiski Fire Department, Nikiski

SECTION I: GENERAL INFORMATION	CR-ERNS Number: 44607
Date of Initial Release: 10/23/90	Date of Initial Call to NRC: 10/23/90

Type of Report: Indicate below the type of report you are submitting.

[ ] Initial Written Notification	[ ] First Anniversary Follow-up Report	[X] Written Notification of a Change to Initial Notification	[ ] Written Notification of a Change to Follow-up Report

Signed Statement: I certify that the hazardous substances releases described herein are continuous and stable in quantity and rate under the definitions in 40 CFR 302.8(a) or 355.4(a)(2)(iii) and that all submitted information is accurate and current to the best of my knowledge.

M . L. Nugent, Plant Manager
Name and Position

1/17/01
Date

Signature

Part A. Facility or Vessel Information

Name of Facility or Vessel: Agrium Kenai Nitrogen Operations

Person in Charge of Facility or Vessel:
Name of Person in Charge M. L. Nugent
Position Plant Manager
Telephone No. (907) 776-8121 Alternate Telephone No. ( ) None

Facility Address or Vessel Port of Registration:
Street Mile 21 Spur Highway County Kenai Peninsula Borough
City Kenai State AK Zip Code 99611

Dun and Bradstreet Number for Facility: 092876390

Facility/Vessel Location:
Latitude Deg N 60 Min 40 Sec 22
Longitude Deg W 151 Min 22 Sec 36

Vessel LORAN Coordinates:

Part B. Population Information

Population Density: Choose the range that describes the population density within a one-mile radius of your facility or vessel (Indicate by placing an "X" in the appropriate blank below.)

X 0 - 50 persons	____ 101 - 500 persons	____ more than 1000 persons
____ 51 - 100 persons	____ 501 - 1000 persons	

Sensitive Populations and Ecosystems Within one Mile Radius:

Sensitive Populations or Ecosystems (e.g., schools, hospitals, wetlands, wildlife preserves, etc.)	Distance and direction from facility
NONE	

SECTION II: SOURCE INFORMATION	CR-ERNS Number
	44607

Part A: Basis for Asserting the Release is Continuous and Stable in Quantity and Rate.
For EACH source of a release of a hazardous substance or mixture from your facility or vessel, provide the following information on a SEPARATE sheet. Photocopy this page if necessary.

Name of Source: Plant #2 Effluent Accumulation Tank, F-434

1. Indicate whether the release from this source is either:

   continuous without interruption ___X___ **OR** routine, anticipated, intermittent _____.

2. Identify the activity(ies) that results in the release from this source (e.g., batch process, filling of a storage tank). If malfunction, describe the malfunction and explain why the release from the malfunction should be considered continuous and stable in quantity and rate.*

   Urea prill production.

3. Identify below how you established the pattern of release and calculated release estimates.

_____ Past release data	__X__ Knowledge of the facility/vessel's operations and release history	__X__ Engineering estimate
_____ AP-42 test	_____ Best professional judgment	_____ Other (explain)

** Note that unanticipated events, such as spills, pipe ruptures, equipment failures, emergency shutdowns, or accidents, do not qualify for reduced reporting under CERCLA section 103(f)(2). Unanticipated events are not incidental to normal operations and, by definition, are not continuous or anticipated, and are not sufficiently predictable or regular to be considered stable in quantity and rate.*

SECTION II: SOURCE INFORMATION (continued)	CR-ERNS Number 44607

Name of Source: Plant #2 Effluent Accumulation Tank, F-434

Part B: Specific Information on the Source

For the source identified above, provide the following information. Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

AFFECTED MEDIUM. Identify the environmental medium (i.e., air, surface water, soil, or ground water) that is affected by the release from this source. If your source releases hazardous substances to more than one medium (e.g., a wastepile releasing to air and ground water), treat the release to **EACH** medium as a separate source and complete Section II, Parts A, B, and C, of this format for **EACH** medium affected.

○ **AIR** __X__ (stack __X__ or area ____) If the medium affected is air, please also specify whether the source is a stack or a ground-based area source.

- If identified source is a **stack**, indicate stack height: ____24____ feet ~~or meters~~; **OR**
- If identified source is an **area source** (e.g., waste pile, landfill, valves, tank vents, pump seals, fugitive emissions), indicate surface area: ___ square feet or square meters.

○ **SURFACE WATER** ____ (stream ____, lake ____, or other _____)

- If the release affects any **surface water body,** give the name of the water body.

  _____

- If the release affects a **stream**, give the stream order or average flow rate, in cubic feet per second.

  stream order: ____ or average flow rate: ____ cubic feet/second; **OR**

- If the release affects a **lake**, give the surface area of the lake in acres and the average depth in meters.

  surface area of lake: ____ acres and average depth of lake: ____ meters.

○ **SOIL OR GROUND WATER** ____

If the release is on or under ground, indicate the distance to the closest water well.

_____

Optional Information

The following information is not required in the final rule; however, such information will assist EPA in evaluating the risks associated with the continuous release. **If this information is not provided, EPA will make conservative assumptions about the appropriate values.** Please note that the units specified below are suggested units. You may use other units; however, be certain that the units are clearly identified.

- For a stack release to air, provide the following information, if available:
  Inside diameter __24__ feet ~~or meters~~
  Gas Exit Velocity __unknown__ feet/second or ~~meters/seconds~~
  Gas Temperature __unknown__ degrees Fahrenheit; ~~Kelvin, or Celsius~~

- For a release to surface water, provide the following information, if available:
  Average Velocity _____ feet/second of Surface Water

SECTION II: SOURCE INFORMATION (continued)	CR-ERNS Number
	44607

Part C. Identity and Quantity of Each Hazardous Substance or Mixture Released From Each Source

Please provide a SEPARATE sheet for EACH source. Photocopy this page if necessary.

Name of Source: Plant #2 Effluent Accumulation Tank, F-434

List each hazardous substance released from the source identified above and provide the following information. (For an example, see Table 1 of Reporting Requirements for Continuous Releases of Hazardous Substances – A Guide for Facilities and Vessels on Compliance.)

Name of Hazardous Substance	CASRN #	Normal Range (in lbs. or kg per day)* Upper Bound	Normal Range (in lbs. or kg per day)* Lower Bound	Number of Releases (per year)	Total Quantity Released in ~~Previous~~ Year (in lbs. ~~or kg~~)*	Months of the Release
Ammonia	7664-41-7	8,400	100	365	108,000	All

List each mixture released from the source identified above and provide the following information. (For an example, see Table 2 of Reporting Requirements for Continuous Releases of Hazardous Substances – A Guide for Facilities and Vessels on Compliance.)

Name of Mixture	Name of Hazardous Substance Components	CASRN#	Weight Percentage	Normal Range of Components (in lbs. or kg per day)* Upper Bound	Normal Range of Components (in lbs. or kg per day)* Lower Bound	Normal Range of Mixture (in lbs. or kg per day)* Upper Bound	Normal Range of Mixture (in lbs. or kg per day)* Lower Bound	Number of Releases (per year)	Total Quantity of Mixture Released in Previous Year (in lbs. or kg)	Months of the Release
N/A										

* *Please be sure to include units where appropriate. Also, if the release is a radionuclide, units of curies (CI) are appropriate.*

SECTION III: HAZARDOUS SUBSTANCE INFORMATION	CR-ERNS Number
	44607

Calculation of the SSI Trigger

For EACH hazardous substance or hazardous substance component of a mixture indicated in Section II, Part C, list the names of the releasing sources and their upper bounds. Please use a SEPARATE sheet for EACH hazardous substance. Photocopy this page if necessary.

Name of Hazardous Substance: Ammonia

To calculate the SSI trigger (i.e., the upper bound of the normal range of a release) for the hazardous substance identified above, aggregate the upper bounds of the normal range of the identified hazardous substance across all sources identified in Section II, Part C. If the hazardous substance is also a component of a mixture, be certain to include the upper bound of the component as calculated in Section II, Part C, in your calculation of the SSI trigger.

Name of Sources(s)	Upper Bound of the Normal Range of the Release (specify lbs., ~~kg, or Ci~~)

PLEASE SEE ATTACHMENT 'A' FOR THIS INFORMATION.

TOTAL – SSI trigger for this hazardous substance release*: _____

* *This method for calculating the SSI trigger for the hazardous substance assumes that all releases of the same hazardous substance or mixture occur simultaneously. To the extent that a hazardous substance is released from your facility from different sources and at different frequencies, you may adjust the SSI trigger as appropriate, so that it more accurately reflects the frequency and quantity of the release. The SSI trigger in the final analysis must reflect the upper bound of the normal range of the release, taking into consideration all sources of the release at the facility or vessel. The normal range of the release includes all releases previously reported or occurring over a 24-hour period during the previous year.*

Attachment "A": Calculation of the SSI Trigger for CR-ERNS No. 44607

Agrium

Kenai Nitrogen Operations

Revised 01/17/2001

Source	All quantities in lbs./day			Comments on Max
	Avg.	Min.	Max.	
Plant 1: CO2 Vent (D-107)	20	8	48	
Plant 1: Dearator (F105)	22	22	22	
Plant 1: Fat Flasher Vent (F-113)	6	6	6	
Plant 1: Wet Reformed Gas Vent (F-130)	0	0	6,200	Startup
Plant 2: Prill Tower (P-406)	1,160	700	1,200	
Plant 2: Atmospheric Absorber (D-405)	0	0	1,000	Scrubber outage
Plant 2: Tank Vent Scrubber (D-406)	0	0	1,000	Scrubber outage
Plant 2: Crystallizer Hotwell (F-410)	5	1	10	
Plant 2: Urea Surge Tank (F-409)	0	0	8	
Plant 2: Vent Scrubber (D-407)	0	0	180	
Plant 2: NH3 Storage Tank Inerts Vent Scrubber (D-408)	21	0	100	
Plant 2: Cooling Tower (E-611)	10	0	6,200	Process condensate stripper outage
Plant 2 - Effluent Accumulation Tank (F-434)	300	100	8,400	
Plant 1 /2: Vent Flare/Stack (B-402)	24	6	4,700	Flare outage
Plant 1 /2: Emergency Flare (B-403)	120	0	700	
Plant 3: Oil/Water Separator Tank	5	0	1,500	Occurs intermittently
Plant 4: Dearator (F-205)	12	12	12	
Plant 4: Fat Flasher (H-269)	12	12	12	
Plant 4: Process Condensate surge drum vent (F-263)	120	120	120	
Plant 4: H2 Vent Stack (C-200)	0	0	1,000	Startup
Plant 4: Process Condensate Stripper Steam Knock-out Drum (H-260)	0	0	6,200	Plant 4 reformer outage
Plant 4: Ammonia Drain Tank (F-287)	0	0	165	Occurs only during pump maintenance
Plant 5: Granulator Scrubber (C-560A/B)	720	680	1,100	
Plant 5: Atmospheric Absorber (D512/D515)	0	0	200	
Plant 5: Vent Scrubber (D511)	500	0	1,000	
Plant 5: Exchanger (E-535)	60	0	240	
Plant 5: HP Scrubber (E-503)	20	20	20	
Plant 5: Cooling Tower (E-711)	10	0	6,200	Process condensate stripper outage
Plant 4/5: Vent Flare/Stack (B-502)	12	0	5,400	Flare outage
Plant 4/5: Emergency Flare (B-501)	2,600	0	7,200	
Fugitives: Valves, Pump Seals, Flanges	400	400	400	
Fugitives: Cooling Towers (2)	4	0	80	
Fugitives: Urea Warehouses	20	10	100	
TOTAL (pounds/day)	6,183	2,097	60,723	See footnote 1
TOTAL (tons/day)	3.1	1.0	30.4	See footnote 1

[1] The maximum is erroneously high because it assumes that simultaneously Plant 1 and 4 are in startup, scrubbers D405 and D406 are down for maintenance, the process condensate stripper is down for maintenance, and that both flares are down for maintenance. To obtain a more realistic upper bound of the normal range, assume that the special causes occur individually. The maximum quantity released from a special case is 6,200 lbs/day from either a plant startup, reformer outage, or process condensate stripper outage. Therefore, the upper bound of the normal range, with only one special cause, is ...

13.7 tpd

Therefore, the normal reported range for routine and cont. releases of ammonia is:

Lower Range (tpd) 3.1

Upper Range (tpd) 13.7

Agrium U.S. Inc.
Kenai Nitrogen Operations
PO Box 575
Kenai, Alaska USA 99611-0575
Telephone (907) 776-3150
Facsimile (907) 776-3213

Agrium

October 17, 2000

ENV-101-00
File 40-7.2.0

Mr. Thor Cutler
Region 10 Continuous Release – ERNS Coordinator
U.S. EPA (HW-114)
1200 Sixth Avenue
Seattle, Washington 98101

Dear Mr. Cutler:

Agrium Kenai Nitrogen Operations, formerlyAlaska Nitrogen Products LLC, notified EPA of a "routine and continuous release" of ammonia on October 23, 1990 (Case Number 44607). In compliance with 40 CFR 302.8(g)(1), *Changes in Source or Composition*, this letter serves as notification of additional ammonia release sources. Telephone notification of the change was made on September 15, 2000. Per 40 CFR 302.8(g)(1), the following information is provided.

Source Addition and Description:

Beginning September 15, 2000, the Plant 2 and Plant 5 cooling towers (E-611 and E-711, respectively) are submitted as additional ammonia release sources. The process condensate stripper is taken out of service for maintenance approximately once every four years. The outage typically occurs during maintenance turnarounds and last for approximately 3 days. During outages, the process condensate, which contains approximately 0.1% ammonia, can be routed to either the Plant 2 or the Plant 5 cooling tower. A portion of the ammonia in the process condensate is evaporated in the cooling tower and released to the atmosphere.

Basis for Stating that it is Continuous and Stable:

Taking the process condensate stripper out of service for maintenance is a planned and routine activity.

Further information about this source is provided in the attached EPA worksheet. Please contact me at (907) 776-3135 for additional information.

Sincerely,

Michelle Grzybowski

Michelle Grzybowski
Environmental Engineer

Attachment

Certified Mail

Cc: B. Longston – U.S. EPA, Seattle
B. Petit – ADEC, Anchorage
C. Stevens – State Emergency Response Commission
J. Henry – Local Emergency Planning Committee, Soldotna
C. Woodle – U.S. Coast Guard, Kenai
Chief B. Harris – Nikiski Fire Department, Nikiski

Attachment "A": Calculation of the SSI Trigger for CR-ERNS No. 44607

Agrium Kenai Nitrogen Operations
Revised 10/17/00

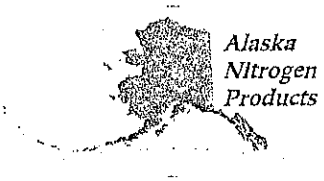
Source	All quantities in lbs./day			Comments on Max
	Avg.	Min.	Max.	
Plant 1: CO2 Vent (D-107)	20	8	48	
Plant 1: Dearator (F105)	22	22	22	
Plant 1: Fat Flasher Vent (F-113)	6	6	6	
Plant 1: Wet Reformed Gas Vent (F-130)	0	0	6,200	Startup
Plant 2: Prill Tower (P-406)	1,160	700	1,200	
Plant 2: Atmospheric Absorber (D-405)	0	0	1,000	Scrubber outage
Plant 2: Tank Vent Scrubber (D-406)	0	0	1,000	Scrubber outage
Plant 2: Crystallizer Hotwell (F-410)	5	1	10	
Plant 2: Urea Surge Tank (F-409)	0	0	8	
Plant 2: Vent Scrubber (D-407)	0	0	180	
Plant 2: NH3 Storage Tank Inerts Vent Scrubber (D-408)	21	0	100	
Plant 2: Cooling Tower (E-611)	10	0	6,200	Process condensate stripper outage
Plant 1 /2: Vent Flare/Stack (B-402)	24	6	4,700	Flare outage
Plant 1 /2: Emergency Flare (B-403)	120	0	700	
Plant 3: Oil/Water Separator Tank	5	0	1,500	Occurs intermittently
Plant 4: Dearator (F-205)	12	12	12	
Plant 4: Fat Flasher (H-269)	12	12	12	
Plant 4: Process Condensate surge drum vent (F-263)	120	120	120	
Plant 4: H2 Vent Stack (C-200)	0	0	1,000	Startup
Plant 4: Process Condensate Stripper Steam Knock-out Drum (H-260)	0	0	6,200	Plant 4 reformer outage
Plant 4: Ammonia Drain Tank (F-287)	0	0	165	Occurs only during pump maintenance
Plant 5: Granulator Scrubber (C-560A/B)	720	680	1,100	
Plant 5: Atmospheric Absorber (D512/D515)	0	0	200	
Plant 5: Vent Scrubber (D511)	500	0	1,000	
Plant 5: Exchanger (E-535)	60	0	240	
Plant 5: HP Scrubber (E-503)	20	20	20	
Plant 5: Cooling Tower (E-711)	10	0	6,200	Process condensate stripper outage
Plant 4/5: Vent Flare/Stack (B-502)	12	0	5,400	Flare outage
Plant 4/5: Emergency Flare (B-501)	2,600	0	7,200	
Fugitives: Valves, Pump Seals, Flanges	400	400	400	
Fugitives: Cooling Towers (2)	4	0	80	
Fugitives: Urea Warehouses	20	10	100	
TOTAL (pounds/day)	5,883	1,997	52,323	See footnote 1
TOTAL (tons/day)	2.9	1.0	26.2	See footnote 1

[1] The maximum is erroneously high because it assumes that simultaneously Plant 1 and 4 are in startup, scrubbers D405 and D406 are down for maintenance, the process condensate stripper is down for maintenance, and that both flares are down for maintenance. To obtain a more realistic upper bound of the normal range, assume that the special causes occur individually. The maximum quantity released from a special case is 6,200 lbs/day from either a plant startup, reformer outage, or process condensate stripper outage. Therefore, the upper bound of the normal range, with only one special cause, is ...

9.5 tpd

Therefore, the normal reported range for routine and cont. releases of ammonia is:	Lower Range (tpd)	2.9
	Upper Range (tpd)	9.5

MLG



Alaska Nitrogen Products LLC
P.O. Box 575
Kenai, Alaska 99611-0575
Telephone (907) 776-8121
Facsimile (907) 776-5579

March 23, 2000
ENV-037-00
File 40-7.2.0

Mr. Thor Cutler
Region 10 Continuous Release – ERNS Coordinator
U.S. EPA (HW-114)
1200 Sixth Avenue
Seattle, Washington 98101

Dear Mr. Cutler:

Alaska Nitrogen Products LLC (ANP) notified EPA of a "routine and continuous release" of ammonia on October 23, 1990 (Case Number 44607). In compliance with 40 CFR 302.8(g)(2), *Changes in the normal reported range*, this letter serves as written notification of a change in our routine and continuous ammonia release reporting range. Telephone notification of the change was made on February 24, 2000. Per 40 CFR 302.8(g)(2), the following information is provided.

Normal Range Change:

The normal reported range for routine and continuous releases of ammonia from ANP has been changed to 2.9 to 9.5 tons per day. The previously reported normal range was 1.8 to 6.9 tons per day.

Reason for the Change:

Ammonia emissions through the Plants 4 & 5 Emergency Flare have increased due to decreased efficiency of the ammonia stripping and/or scrubbing systems in Urea Plant 5. The exact cause of the decreased efficiency has not been determined and diagnosis and repair will require a complete shutdown of the facility, which is scheduled for August 2000. In the mean time, ANP has attempted to increase efficiency on-line by steam purging the vessels, which helped somewhat, but did not completely correct the problem.

To keep the scrubbers from being overloaded, a bypass valve to the emergency flare has been partially opened, which results in additional ammonia being released through the flare. The emergency flare is designed to burn large quantities of ammonia during process upsets. It is not capable of combusting the relatively small quantities of gas that are introduced from the bypass valve or from the other fugitive emission sources, therefore the ammonia passes through the flare unoxidized and is vented to the atmosphere.

The EPA Release Worksheet for the emergency flare (B501) has been revised to include the emissions from the bypass valve, and is attached for your review. Please discard the previously submitted worksheet for this source.

Basis for Stating that it is Continuous and Stable:

The emissions through the Emergency Flare are continuous and without interruption. Since this release is not harmful to human health or the environment, the decision was made to continue plant operation with decreased stripper and/or scrubber efficiency until the next planned maintenance shutdown in August 2000.

I have also attached a revised table for the calculation of the SSI trigger, which incorporates the increased emissions through the Plants 4 & 5 emergency flare. Please discard the previously submitted table. If you have any questions or require additional information I can be reached at (907) 776-3135.

Sincerely,

Michelle Grzybowski

Michelle Grzybowski
Environmental Engineer

Attachment

Certified Mail

cc: Bill Longston – U.S. EPA, Seattle
Judy Musgrove – ADEC, Anchorage
Camille Stevens – State Emergency Response Commission
John Alcantra – Local Emergency Planning Committee, Soldotna
Chris Woodle – U.S. Coast Guard, Kenai
Billy Harris – Chief, Nikiski Fire Department, Nikiski

Attachment "A": Calculation of the SSI Trigger for CR-ERNS No. 44607

Alaska Nitrogen Products LLC
Revised 03/23/00

Source	All quantities in lbs./day			Comments on Max
	Avg	Min	Max	
Plant 1: CO2 Vent (D-107)	20	8	48	
Plant 1: Dearator (F105)	22	22	22	
Plant 1: Fat Flasher Vent (F-113)	6	6	6	
Plant 1: Wet Reformed Gas Vent (F-130)	0	0	6,200	Startup
Plant 2: Prill Tower (P-406)	1,160	700	1,200	
Plant 2: Atmospheric Absorber (D-405)	0	0	1,000	Scrubber outage
Plant 2: Tank Vent Scrubber (D-406)	0	0	1,000	Scrubber outage
Plant 2: Crystallizer Hotwell (F-410)	5	1	10	
Plant 2: Urea Surge Tank (F-409)	0	0	8	
Plant 2: Vent Scrubber (D-407)	0	0	180	
Plant 2: NH3 Storage Tank Inerts Vent Scrubber (D-408)	21	0	100	
Plant 1 /2: Vent Flare/Stack (B-402)	24	6	4,700	Flare outage
Plant 1 /2: Emergency Flare (B-403)	120	0	700	
Plant 3: Oil/Water Separator Tank	5	0	1,500	Occurs intermittently
Plant 4: Dearator (F-205)	12	12	12	
Plant 4: Fat Flasher (H-269)	12	12	12	
Plant 4: Process Condensate surge drum vent (F-263)	120	120	120	
Plant 4: H2 Vent Stack (C-200)	0	0	1,000	Startup
Plant 4: Process Condensate Stripper Steam Knock-out Drum (H-260)	0	0	6,200	Plant 4 reformer outage
Plant 4: Ammonia Drain Tank (F-287)	0	0	165	Occurs only during pump maintenance
Plant 5: Granulator Scrubber (C-560A/B)	720	680	1,100	
Plant 5: Atmospheric Absorber (D512/D515)	0	0	200	
Plant 5: Vent Scrubber (D511)	500	0	1,000	
Plant 5: Exchanger (E-535)	60	0	240	
Plant 5: HP Scrubber (E-503)	20	20	20	
Plant 4/5: Vent Flare/Stack (B-502)	12	0	5,400	Flare outage
Plant 4/5: Emergency Flare (B-501)	2,600	0	7,200	
Fugitives: Valves, Pump Seals, Flanges	400	400	400	
Fugitives: Cooling Towers (2)	4	0	80	
Fugitives: Urea Warehouses	20	10	100	
TOTAL (pounds/day)	5,863	1,997	39,923	See footnote 1
TOTAL (tons/day)	3	1.0	20.0	See footnote 1

[1] The maximum is erroneously high because it assumes that simultaneously Plant 1 and 4 are in startup, scrubbers D405 and D406 are down for maintenance, and that both flares are down for maintenance. To obtain a more realistic upper bound of the normal range, assume that the special causes occur individually. The maximum quantity released from a special case is 6,200 lbs/day from either a plant startup or reformer outage. Therefore, the upper bound of the normal range, with only one special cause, is ...

9.5 tpd

Therefore, the normal reported range for routine and cont. releases of ammonia is:

Lower Range (tpd) 2.9

Upper Range (tpd) 9.5

MLD

Unocal Alaska Resources
Unocal Corporation
P.O. Box 575
Kenai, Alaska 99611

UNOCAL 76

November 11, 1999
ENV-114-99
File 40-7.2.0

Mr. Thor Cutler
Region 10 Continuous Release – ERNS Coordinator
U.S. EPA (HW-114)
1200 Sixth Avenue
Seattle, Washington 98101

Dear Mr. Cutler:

Alaska Nitrogen Products LLC notified EPA of a "routine and continuous release" of ammonia on October 23, 1990 (Case Number 44607). In compliance with 40 CFR 302.8(g)(1), *Changes in Source or Composition*, this letter serves as notification of an additional ammonia release source. Telephone notification of the change was made on September 7, 1999. Per 40 CFR 302.8(g)(1), the following information is provided.

Source Addition and Description:

Beginning September 7, 1999, an additional ammonia release source from the Plant 4 ammonia drain tank (F-287) is submitted. The ammonia drain tank is used to collect ammonia and oil mixtures whenever pump maintenance work is required. Ammonia vapors from the tank are typically burned in the small flare system (B-502), however, due to safety concerns, these vapors must occasionally be vented to the atmosphere.

Ammonia venting to the atmosphere occurs only when the large flare (B-501) is activated. The large flare, since it pulls more of a vacuum than the small flare, causes the ammonia drain tank's vacuum breaker to lift, thus allowing oxygen into the flare system. To avoid this, the drain tank is isolated from the flare system and is vented to atmosphere whenever the large flare is in service.

Basis for Stating that it is Continuous and Stable:

Venting of ammonia from the drain tank during periods when the B-501 flare is in service is a planned and routine activity. This activity occurs whenever pump maintenance is required, which is less than once per week.

Further information about this source is provided in the attached EPA worksheet. Please contact me at (907) 776-3135 for additional information.

Sincerely,

Alaska Nitrogen Products LLC

Michelle Deitering
Environmental Engineer

Attachment

Certified Mail

Cc: B. Longston – U.S. EPA, Seattle
J. Musgrove – ADEC, Anchorage
C. Stevens – State Emergency Response Commission
J. Alcantra – Local Emergency Planning Committee, Soldotna
C. Woodle – U.S. Coast Guard, Kenai
Chief B. Harris – Nikiski Fire Department, Nikiski

Attachment "A": Calculation of the SSI Trigger for CR-ERNS No. 44607

Alaska Nitrogen Products LLC
Revised 11/12/99

Source	All quantities in lbs./day			Comments on Max
	Avg.	Min.	Max.	
Plant 1: CO2 Vent (D-107)	20	8	48	
Plant 1: Dearator (F105)	22	22	22	
Plant 1: Fat Flasher Vent (F-113)	6	6	6	
Plant 1: Wet Reformed Gas Vent (F-130)	0	0	6,200	Startup
Plant 2: Prill Tower (P-406)	1160	700	1,200	
Plant 2: Atmospheric Absorber (D-405)	0	0	1,000	Scrubber outage
Plant 2: Tank Vent Scrubber (D-406)	0	0	1,000	Scrubber outage
Plant 2: Crystallizer Hotwell (F-410)	5	1	10	
Plant 2: Urea Surge Tank (F-409)	0	0	8	
Plant 2: Vent Scrubber (D-407)	0.1	0	180	
Plant 2: NH3 Storage Tank Inerts Vent Scrubber (D-408)	21	0	100	
Plant 1 /2: Vent Flare/Stack (B-402)	24	6	4,700	Flare outage
Plant 1 /2: Emergency Flare (B-403)	120	0	700	
Plant 3: Oil/Water Separator Tank	5	0	1,500	Occurs intermittently
Plant 4: Dearator (F-205)	12	12	12	
Plant 4: Fat Flasher (H-269)	12	12	12	
Plant 4: Process Condensate surge drum vent (F-263)	120	120	120	
Plant 4: H2 Vent Stack (C-200)	0	0	1,000	Startup
Plant 4: Process Condensate Stripper Steam Knock-out Drum (H-260)	0	0	6,200	Plant 4 reformer outage
Plant 4: Ammonia Drain Tank (F-287)	0	0	165	Occurs only during pump maintenance
Plant 5: Granulator Scrubber (C-560A/B)	720	680	1,100	
Plant 5: Atmospheric Absorber (D512/D515)	0	0	200	
Plant 5: Vent Scrubber (D511)	500	0	1,000	
Plant 5: Exchanger (E-535)	60	0	240	
Plant 5: HP Scrubber (E-503)	20	20	20	
Plant 4/5: Vent Flare/Stack (B-502)	12	0	5,400	Flare outage
Plant 4/5: Emergency Flare (B-501)	260	0	2,000	
Fugitives: Valves, Pump Seals, Flanges	400	400	400	
Fugitives: Cooling Towers (2)	4	0	80	
Fugitives: Urea Warehouses	20	10	100	
TOTAL (pounds/day)	3523.1	1,997	34,723	See footnote 1
TOTAL (tons/day)	1.8	1.0	17.4	See footnote 1

[1] The maximum is erroneously high because it assumes that simultaneously Plant 1 and 4 are in startup, scrubbers D405 and D406 are down for maintenance, and the both flares are down for maintenance. To obtain a more realistic upper bound of the normal range, assume that the special causes occur individually. The maximum quantity released from a special case is 6,200 lbs/day from elther a plant startup or reformer outage. Therefore, the upper bound of the normal range, with only one special cause, is ...

6.9 tpd

Therefore, the normal reported range for routine and continuous releases of ammonia is 1.8 to 6.9 tpd.

Unocal Alaska Resources
Unocal Corporation
P.O. Box 575
Kenai, Alaska 99611

UNOCAL 76

August 13, 1999
ENV-077-99
File 40-7.2.0

Mr. Thor Cutler
Region 10 Continuous Release – ERNS Coordinator
U.S. EPA (HW114)
1200 Sixth Avenue
Seattle, Washington 98101

Dear Mr. Cutler:

Alaska Nitrogen Products LLC (formerly Unocal Agricultural Products), Case No. 44607, notified EPA of a "routine and continuous release" of ammonia on October 23, 1990. In compliance with 40 CFR 302.8(g)(1), *Changes in Source or Composition*, this letter serves as notification of a change in source of ANP's routine and continuous ammonia release. Per 40 CFR 302.8(g)(1), the following information is provided:

Source Change:

Beginning August 10, 1999, an additional ammonia release source from the Ammonia Plant 5 High Pressure Scrubber (E-503) was present. This source releases approximately 20 pounds of ammonia per day. The National Response Center was notified of this change on August 12, 1999 (P.O. Gauthier, Report Number 494865).

Reason for the Change:

The ammonia is being released from a small pinhole leak on the manway of the high pressure scrubber. The leak is primarily carbon dioxide and inerts with a small amount of ammonia. Repair of this leak can not be done on-line, so it is scheduled for the next planned shutdown of Urea Plant 5.

Basis for Stating that the Release is Continuous and Stable:

This release is continuous and without interruption. The release quantity of 20 pounds of ammonia per day is an engineering estimate based on the surface area of the leak and ammonia concentrations in the general vicinity of the leak.

Further information about this source is provided in the attached EPA worksheet. Please add these worksheets to the report submitted to you on July 13, 1999 (ENV-059-99). If you have any questions or require additional information I can be reached at (907) 776-3135.

Sincerely,

Alaska Nitrogen Products LLC

Michelle Deitering
Environmental Engineer

Attachment
Certified Mailing

cc: B. Longston – EPA Region 10
J. Musgrove – ADEC, Juneau
C. Stevens - State Emergency Response Commission
Chief B. Harris – Nikiski Fire Department, Nikiski
C. Woodle – U.S. Coast Guard, Kenai
J. Alcantra – Local Emergency Planning Committee, Soldotna

SECTION III: HAZARDOUS SUBSTANCE INFORMATION	CR-ERNS Number
	44607

Calculation of the SSI Trigger

For EACH hazardous substance or hazardous substance component of a mixture indicated in Section II, Part C, list the names of the releasing sources and their upper bounds. Please use a SEPARATE sheet for EACH hazardous substance. Photocopy this page if necessary.

Name of Hazardous Substance: Ammonia

To calculate the SSI trigger (i.e., the upper bound of the normal range of a release) for the hazardous substance identified above, aggregate the upper bounds of the normal range of the identified hazardous substance across all sources identified in Section II, Part C. If the hazardous substance is also a component of a mixture, be certain to include the upper bound of the component as calculated in Section II, Part C, in your calculation of the SSI trigger.

Name of Sources(s)	Upper Bound of the Normal Range of the Release (specify lbs., ~~kg, or Ci~~)

PLEASE SEE ATTACHMENT 'A' FOR THIS INFORMATION.

TOTAL – SSI trigger for this hazardous substance release*: _____

** This method for calculating the SSI trigger for the hazardous substance assumes that all releases of the same hazardous substance or mixture occur simultaneously. To the extent that a hazardous substance is released from your facility from different sources and at different frequencies, you may adjust the SSI trigger as appropriate, so that it more accurately reflects the frequency and quantity of the release. The SSI trigger in the final analysis must reflect the upper bound of the normal range of the release, taking into consideration all sources of the release at the facility or vessel. The normal range of the release includes all releases previously reported or occurring over a 24-hour period during the previous year.*

Attachment "A": Calculation of the SSI Trigger for CR-ERNS No. 44607

Alaska Nitrogen Products LLC

Revised 7/13/99

Source	All quantities in lbs/day			Comments on Max
	Avg	Min	Max	
Plant 1: CO2 Vent (D-107)	20	8	48	
Plant 1: Dearator (F105)	22	22	22	
Plant 1: Fat Flasher Vent (F-113)	6	6	6	
Plant 1: Wet Reformed Gas Vent (F-130)	0	0	6,200	Startup
Plant 2: Prill Tower (P-406)	1160	700	1,200	
Plant 2: Atmospheric Absorber (D-405)	0	0	1,000	Scrubber outage
Plant 2: Tank Vent Scrubber (D-406)	0	0	1,000	Scrubber outage
Plant 2: Crystallizer Hotwell (F-410)	5	1	10	
Plant 2: Urea Surge Tank (F-409)	0	0	8	
Plant 2: Vent Scrubber (D-407)	0.1	0	180	
Plant 2: NH3 Storage Tank Inerts Vent Scrubber (D-408)	21	0	100	
Plant 1 /2: Vent Flare/Stack (B-402)	24	6	4,700	Flare outage
Plant 1 /2: Emergency Flare (B-403)	120	0	700	
Plant 3: Oil/Water Separator Tank	5	0	1,500	Occurs intermittently
Plant 4: Dearator (F-205)	12	12	12	
Plant 4: Fat Flasher (H-269)	12	12	12	
Plant 4: Process Condensate surge drum vent (F-263)	120	120	120	
Plant 4: H2 Vent Stack (C-200)	0	0	1,000	Startup
Plant 4: Process Condensate Stripper Steam Knock-out Drum (H-260)	0	0	6,200	Plant 4 reformer outage
Plant 5: Granulator Scrubber (C-560A/B)	720	680	1,100	
Plant 5: Atmospheric Absorber (D512/D515)	0	0	200	
Plant 5: Vent Scrubber (D511)	500	0	1,000	
Plant 5: Exchanger (E-535)	60	0	240	
Plant 5: HP Scrubber (E-503)	20	20	20	
Plant 4/5: Vent Flare/Stack (B-502)	12	0	5,400	Flare outage
Plant 4/5: Emergency Flare (B-501)	260	0	2,000	
Fugitives: Valves, Pump Seals, Flanges	400	400	400	
Fugitives: Cooling Towers (2)	4	0	80	
Fugitives: Urea Warehouses	20	10	100	
TOTAL (pounds/day)	3523.1	1,997	34,558	See footnote 1
TOTAL (tons/day)	1.8	1.0	17.3	See footnote 1

[1] The maximum is erroneously high because it assumes that simultaneously Plant 1 and 4 are in startup, scrubbers D405 and D406 are down for maintenance, and the both flares are down for maintenance. To obtain a more realistic upper bound of the normal range, assume that the special causes occur individually. The maximum quantity released from a special case is 6,200 lbs/day from either a plant startup or reformer outage. Therefore, the upper bound of the normal range, with only one special cause, is ...

6.9 tpd

Therefore, the normal reported range for routine and continuous releases of ammonia is 1.8 to 6.9 tpd.

p:\env\cercla\rc-99.xls

Unocal Alaska Resources
Unocal Corporation
P.O. Box 575
Kenai, Alaska 99611

UNOCAL 76

July 13, 1999
ENV-059-99
File 40-7.2.0

Mr. Thor Cutler
Region 10 Continuous Release – ERNS Coordinator
U.S. EPA (HW114)
1200 Sixth Avenue
Seattle, Washington 98101

Dear Mr. Cutler:

Attached please find an updated report for Routine and Continuous Releases of ammonia from Unocal's Kenai Facility, case number 44607. Note that the facility name has been changed from "Unocal Agricultural Products" to "Alaska Nitrogen Products LLC". However, we continue to be owned and operated by the Union Oil Company of California (dba Unocal).

In compliance with 40 CFR 302.8, the attached report provides notification of changes in our routine and continuous ammonia release sources and a change in the upper bound of the reported normal range. All revisions are described below:

1. Ammonia emissions from the Plant 2 Prill Tower and Plant 5 Granulator stacks were updated. Previously, emission quantities were based on one test that was conducted in 1993. More recent laboratory analyses showed lower emission levels, especially in the Plant 5 Granulator stacks. These changes are reflected in the attached worksheets.

2. Ammonia emissions from the emergency flares (Plants 1&2: B101, and Plants 4&5: B201) decreased due to improvements in several pieces of equipment which block flow to the emergency flares during normal operation. These changes are reflected in the attached worksheet.

3. Ammonia emissions from the Plant 5 exchanger (E-535) were updated. Beginning March 25, 1998, this source released approximately one pound per hour of ammonia from a diaphragm leak. This leak was fixed on May 11, 1998 during a planned maintenance shutdown. Beginning in August 1999, Unocal will be installing a vent on the E-535 exchanger to investigate whether decreasing the pressure on this system will improve the plant stability and operating efficiency. The material vented is primarily steam with a small amount of ammonia (approximately 2 to 3 pounds per hour of ammonia). If this test is successful, the

cc: B. L
J. Mu

vent will remain in place until the next planned maintenance shutdown, at which time the vent will be rerouted into the process or flare system. This release is continuous and without interruption and therefore qualifies for reduced reporting under 40 CFR 302.8. An updated worksheet for this source is attached for your review.

4. Ammonia emissions from the Plant 2 scrubbers (D-407 and D-408) and the Plant 5 scrubbers (D-511 and D-512/D-515) were updated to include results from more recent laboratory analyses.

5. The changes in ammonia emissions that are discussed above resulted in a "*Change in the Normal Range*", as described in 40 CFR 302.8 (g)(2). The normal reported range for routine and continuous releases of ammonia from Alaska Nitrogen Products LLC is now 1.6 to 6.6 tons per day (tpd). The previously reported normal range was 1.7 to 7.4 tpd. Attachment A contains a complete list of each ammonia source at this facility along with the average, minimum, and maximum quantity of ammonia released from each source each day. This table is used to calculate the normal range and the notification trigger for Statistically Significant Increases in emissions. The National Response Center was notified of this change at 3:15 p.m. on June 23, 1999 (P.O. Gauther, Report number 488607).

Please discard any previously submitted worksheets and replace them with the attached complete report. If you have any questions or require additional information please contact me at (907) 776-3135.

Sincerely,

Alaska Nitrogen Products LLC
Union Oil Company of California

Michelle Deitering
Environmental Engineer

Enclosure

Certified Mailing

Attachment "A": Calculation of the SSI Trigger for CR-ERNS No. 44607

Alaska Nitrogen Products LLC

Revised 6/25/99

Source	All quantities in lbs/day			Comments on Max
	Avg	Min	Max	
Plant 1: CO2 Vent (D-107)	20	8	48	
Plant 1: Dearator (F105)	22	22	22	
Plant 1: Fat Flasher Vent (F-113)	6	6	6	
Plant 1: Wet Reformed Gas Vent (F-130)	0	0	6,200	Startup
Plant 2: Prill Tower (P-406)	1160	700	1,200	
Plant 2: Atmospheric Absorber (D-405)	0	0	1,000	Scrubber outage
Plant 2: Tank Vent Scrubber (D-406)	0	0	1,000	Scrubber outage
Plant 2: Crystallizer Hotwell (F-410)	5	1	10	
Plant 2: Urea Surge Tank (F-409)	0	0	8	
Plant 2: Vent Scrubber (D-407)	0.1	0	180	
Plant 2: NH3 Storage Tank Inerts Vent Scrubber (D-408)	21	0	100	
Plant 1 /2: Vent Flare/Stack (B-402)	24	6	4,700	Flare outage
Plant 1 /2: Emergency Flare (B-403)	120	0	700	
Plant 3: Oil/Water Separator Tank	5	0	1,500	Occurs intermittently
Plant 4: Dearator (F-205)	12	12	12	
Plant 4: Fat Flasher (H-269)	12	12	12	
Plant 4: Process Condensate surge drum vent (F-263)	120	120	120	
Plant 4: H2 Vent Stack (C-200)	0	0	1,000	Startup
Plant 4: Process Condensate Stripper Steam Knock-out Drum (H-260)	0	0	6,200	Plant 4 reformer outage
Plant 5: Granulator Scrubber (C-560A/B)	720	680	1,100	
Plant 5: Atmospheric Absorber (D512/D515)	0	0	200	
Plant 5: Vent Scrubber (D511)	500	0	1,000	
Plant 5: Exchanger (E-535)	60	0	240	
Plant 4/5: Vent Flare/Stack (B-502)	12	0	5,400	Flare outage
Plant 4/5: Emergency Flare (B-501)	260	0	2,000	
Fugitives: Valves, Pump Seals, Flanges	400	400	400	
Fugitives: Cooling Towers (2)	4	0	80	
Fugitives: Urea Warehouses	20	10	100	
TOTAL (pounds/day)	3503.1	1,977	34,538	See footnote 1
TOTAL (tons/day)	1.8	1.0	17.3	See footnote 1

[1] The maximum is erroneously high because it assumes that simultaneously Plant 1 and 4 are in startup, scrubbers D405 and D406 are down for maintenance, and the both flares are down for maintenance. To obtain a more realistic upper bound of the normal range, assume that the special causes occur individually. The maximum quantity released from a special case is 6,200 lbs/day from either a plant startup or reformer outage. Therefore, the upper bound of the normal range, with only one special cause, is ...

~~6.9~~ fpd — W/o special causes or oil/H_2O separator

Therefore, the normal reported range for routine and continuous releases of ammonia is 1.8 to 6.9 tpd.

Agrium

Agrium U.S. Inc.
Kenai Nitrogen Operations
PO Box 575
Kenai, Alaska USA 99611-0575
Telephone (907) 776-8121
Facsimile (907) 776-3213

June 18, 2002

ENV-076-02
File 40-2.0
40-7.2.0

Chris Field, ERNS Coordinator
US Environmental Protection Agency
Region 10, Continuous Release (HW-114)
1200 Sixth Avenue
Seattle WA 98101

Subject: Update to Routine and Continuous Release Report, Case No. 44607

Dear Mr. Field,

The purpose of this letter is to provide you with additional information concerning two routine and continuous release reports from Agrium Kenai Nitrogen Operations, Case Number 44607.

Agrium notified EPA of a new temporary routine and continuous release from our Plant 2 Effluent Accumulation Tank (F-434) in a letter dated January 17, 2001 (*M. Grzybowski, Agrium, to T. Cutler, EPA, ENV-007-01*). The tank is currently vented to atmosphere, resulting in the release of approximately 300 pounds of ammonia per day on average. Our plan is install a new pressure relief valve that will allow us to send the ammonia vapors to a scrubber, thus eliminated the release to atmosphere. We originally reported that this work would be completed during a plant maintenance shutdown that was scheduled for the summer of 2001. However, the plant shutdown was postponed until 2003, and since this work requires a complete plant outage, it is now scheduled to be completed at that time. In the meantime, the paperwork that is currently on file with your office, which lists the F-434 tank as a release source, is accurate. We will notify you when this source is eliminated.

The second clarification regards a routine and continuous release report from the Plant 2 Ammonia Preheater (F-427) dated February 28, 2002 (*M. Grzybowski, Agrium to C. Field, EPA, ENV-030-02*). This source was temporary and was eliminated on February 18, 2002. In the notification letter it was stated that, with the elimination of this source, our routine and continuous release quantity returned to its previous level of 2.9 to 9.5 tons of ammonia per day (tpd). This range was incorrect in that our previous (and current) release level averages 3.1 tpd, with an upper range of 13.7 tpd to cover plant startups and other intermittent operating conditions. Please see the attached table, which clarifies how this range is calculated.

Please let me know if you require additional information. I can be reached at (907) 776-3135.

Sincerely,

Michelle Grzybowski

Michelle Grzybowski
Environmental Engineer

Attachment

CERTIFIED MAIL

cc: Bob Petit - ADEC, Anchorage
Camille Stephens - State Emergency Response Commission, ADEC, Juneau
Jan Henry - Local Emergency Planning Committee, Soldotna
Lt. Mark McManus - U.S. Coast Guard, Kenai
Chief Dan Gregory - Nikiski Fire Department, Nikiski

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Attachment "A": Calculation of the SSI Trigger for CR-ERNS No. 44607

Agrium Kenai Nitrogen Operations
Revised 06/18/2002

Source	All quantities in lbs./day			Comments on Max
	Avg.	Min.	Max.	
Plant 1: CO2 Vent (D-107)	20	8	48	
Plant 1: Dearator (F105)	22	22	22	
Plant 1: Fat Flasher Vent (F-113)	6	6	6	
Plant 1: Wet Reformed Gas Vent (F-130)	0	0	6,200	Startup
Plant 2: Prill Tower (P-406)	1,160	700	1,200	
Plant 2: Atmospheric Absorber (D-405)	0	0	1,000	Scrubber outage
Plant 2: Tank Vent Scrubber (D-406)	0	0	1,000	Scrubber outage
Plant 2: Crystallizer Hotwell (F-410)	5	1	10	
Plant 2: Urea Surge Tank (F-409)	0	0	8	
Plant 2: Vent Scrubber (D-407)	0	0	180	
Plant 2: NH3 Storage Tank Inerts Vent Scrubber (D-408)	21	0	100	
Plant 2: Cooling Tower (E-611)	10	0	6,200	Process condensate stripper outage
Plant 2 - Effluent Accumulation Tank (F-434)	300	100	8,400	
Plant 1 /2: Vent Flare/Stack (B-402)	24	6	4,700	Flare outage
Plant 1 /2: Emergency Flare (B-403)	120	0	700	
Plant 3: Oil/Water Separator Tank	5	0	1,500	Occurs intermittently
Plant 4: Dearator (F-205)	12	12	12	
Plant 4: Fat Flasher (H-269)	12	12	12	
Plant 4: Process Condensate surge drum vent (F-263)	120	120	120	
Plant 4: H2 Vent Stack (C-200)	0	0	1,000	Startup
Plant 4: Process Condensate Stripper Steam Knock-out Drum (H-260)	0	0	6,200	Plant 4 reformer outage
Plant 4: Ammonia Drain Tank (F-287)	0	0	165	Occurs only during pump maintenance
Plant 5: Granulator Scrubber (C-560A/B)	720	680	1,100	
Plant 5: Atmospheric Absorber (D512/D515)	0	0	200	
Plant 5: Vent Scrubber (D511)	500	0	1,000	
Plant 5: Exchanger (E-535)	60	0	240	
Plant 5: HP Scrubber (E-503)	20	20	20	
Plant 5: Cooling Tower (E-711)	10	0	6,200	Process condensate stripper outage
Plant 4/5: Vent Flare/Stack (B-502)	12	0	5,400	Flare outage
Plant 4/5: Emergency Flare (B-501)	2,600	0	7,200	
Fugitives: Valves, Pump Seals, Flanges	400	400	400	
Fugitives: Cooling Towers (2)	4	0	80	
Fugitives: Urea Warehouses	20	10	100	
TOTAL (pounds/day)	6,183	2,097	60,723	See footnote 1
TOTAL (tons/day)	3.1	1.0	30.4	See footnote 1

[1] The maximum is erroneously high because it assumes that simultaneously Plant 1 and 4 are in startup, scrubbers D405 and D406 are down for maintenance, the process condensate stripper is down for maintenance, and that both flares are down for maintenance. To obtain a more realistic upper bound of the normal range, it is assumed that the special causes occur individually. The maximum quantity released from a special case is 6,200 lbs/day from either a plant startup, reformer outage, or process condensate stripper outage. Therefore, the upper bound of the normal range, with only one special cause, is ...

13.7 tpd

Therefore, the normal reported range for routine and cont. releases of ammonia is:

Lower Range (tpd)	1.0
Plant Avg. (tpd)	3.1
Upper Range (tpd)	13.7